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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/688,867

10/17/2003

Francesco Stellacci

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Pearl Cohen Zedek Latzer, LLP
1500 Broadway
12th Floor
New York, NY 10036

EXAMINER

YANG, NELSON C

ART UNIT

PAPER NUMBER

1641

MAIL DATE

DELIVERY MODE

04/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/688,867	Applicant(s) STELLACCI ET AL.	
	Examiner Nelson Yang	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) 11,112,145,146,177-180,182,183,215 and 216 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,40,49,50,52,57,58,97,106,107 and 109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/30/04, 12/05/07</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are
1,2,40,49,50,52,57,58,97,106,107,109,111,112,145,146,177-180,182,183,215 and 216.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of in the reply filed on February 14, 2008 is acknowledged.
2. Claims 11, 112, 145, 146, 177-180, 182, 183, 215, and 216 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 14, 2008.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 49, 50, 52, 57, 58, 106, 107, 109 are rejected under 35 U.S.C. 102(b) as being anticipated by Guire et al. [US 6,514,768].

With respect to claim 1, Guire et al. teach providing a master array having a support surface, immobilizing a plurality of oligonucleotides on the master array support surface, hybridizing multi-ligand conjugates with the oligonucleotides on the master array support surface, providing an assay array support surface, and disassociating the first binding domains from the master array support that permits the conjugates to remain upon the assay support surface (column 17, line 40 – column 18, line 25).

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5. With respect to claim 2, Guire et al. teach that the multi-ligand conjugates contain a plurality of active domains (exposed functionality) (column 13, lines 22-28).

6. With respect to claim 49, Guire et al. teach an embodiment where portions of the second substrate are free of the multi-ligand components (see fig. 1A).

7. With respect to claims 50, 52, Guire et al. teach that the assay arrays may then be used as master arrays to form corresponding assays arrays by the same process (column 18, lines 55-63).

Guire et al. teach passivating the surface of the assay array prior to and/or after exposure to the binding partner, such as with a surfactant (column 17, lines 1-5) or using wet chemical etching procedures to etch the substrate (column 21, lines 70-11). Guire et al. further teach washing excess conjugates from the surface of the substrate (column 21, lines 30-35), which would uncover portions of the substrate that are not part of the pattern.

8. With respect to claim 57, Guire et al. teach providing a master array having a support surface, immobilizing a plurality of oligonucleotides on the master array support surface, hybridizing multi-ligand conjugates with the oligonucleotides on the master array support surface, providing an assay array support surface, and disassociating the first binding domains from the master array support that permits the conjugates to remain upon the assay support surface (column 17, line 40 – column 18, line 25). Guire et al. further teach that the multi-ligand conjugates contain a plurality of active domains (exposed functionality) (column 13, lines 22-28). Guire et al. teach that the assay arrays may then be used as master arrays to form corresponding assays arrays by the same process (column 18, lines 55-63).

9. With respect to claim 58, Guire et al. teach that the multi-ligand conjugates contain a plurality of active domains (exposed functionality) (column 13, lines 22-28).

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10. With respect to claim 106, Guire et al. teach an embodiment where portions of the second substrate are free of the multi-ligand components (see fig. 1A). Therefore, since the pattern on the third substrate is formed by the same process as the second, portions of the third substrate would also be free of molecules.

11. With respect to claims 107, 109, Guire et al. teach that the assay arrays may then be used as master arrays to form corresponding assays arrays by the same process (column 18, lines 55-63). Guire et al. teach passivating the surface of the assay array prior to and/or after exposure to the binding partner, such as with a surfactant (column 17, lines 1-5) or using wet chemical etching procedures to etch the substrate (column 21, lines 70-11). Guire et al. further teach washing excess conjugates from the surface of the substrate (column 21, lines 30-35), which would uncover portions of the substrate that are not part of the pattern.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 40 and 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guire et al. [US 6,514,768] in view of Aksay et al. [US 2001/0023024].

With respect to claims 40, 97, Guire et al. teach providing a master array having a support surface that may be metal (column 7, lines 53-58) to form a pattern (column 3, lines 60-65), immobilizing a plurality of oligonucleotides on the master array support surface, hybridizing

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multi-ligand conjugates with the oligonucleotides on the master array support surface, providing an assay array support surface, and disassociating the first binding domains from the master array support that permits the conjugates to remain upon the assay support surface (column 17, line 40 – column 18, line 25). Guire et al. fail to teach that the patterning is performed using electron beam lithography on a metal surface.

Aksay et al. teach using electron beam lithography to form patterns on arrays (para. 0080) and further teach that this allow for thinner structures to be formed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used electron beam lithography to form the patterns in the master array of Guire et al., as suggested by Aksay et al., in order to form small patterns, thus decreasing the size of the array formed.

Conclusion

14. No claims are allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571)272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nelson Yang/
Patent Examiner, Art Unit 1641